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Did children's perceptions of an after-school social learning program predict change in their behavior?

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Abstract

This research explored the influence of children's perceptions of a pro-social behavior after-school program on actual change in the children's behavioral outcomes over the program's duration. Children's perceptions of three program processes were collected as well as self-reported pro-social and anti-social behavior before and after the program. Statistical models showed that: Positive perceptions of the program facilitators' dispositions significantly predicted reductions in anti-social behavior; and positive perceptions with the program activities significantly predicted gains in pro-social behavior. The children's perceptions of their peers' behavior in the sessions were not found to a significant predictor of behavioral change. The two significant perceptual indicators predicted a small percentage of the change in the behavioral outcomes. However, as after-school social learning programs have a research history of problematic implementation children's perceptions should be considered in future program design, evaluation and monitoring.

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1. Introduction

Improving children's social, personal and behavioral outcomes has received increasing international attention. One of the major methods used in an attempt to improve these outcomes has been to design manualized programs, which aim to reduce negative behaviors and promote children's pro-social skills. These programs are often referred to as social and emotional learning programs (SEL) or social skills training. Some major international examples, include PATHS® (Promoting Alternative THinking Strategies - Greenberg, Kusche, Cook & Quamma, 1995), The Incredible Years (Webster-Stratton, & Reid, 2003), Life Skills Training (Botvin & Griffin, 2002) and the Olweus Bullying Prevention Program (Olweus & Limber, 1999). The majority of SEL programs are delivered 'in-school'. However, these programs are increasingly being delivered in other contexts including 'after-school' settings.

There are now numerous studies, systematic reviews and meta-analyses looking at the effectiveness of SEL programs. Overall, studies provide a favorable view of their effectiveness and show small to moderate effects of these programs on social, behavioral and academic outcomes (January, Casey, & Paulson, 2011; Diekstra, 2008; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Losel & Beelman, 2003; Quinn, Kavale, Mathur, Rutherford, & Forness, 1999; Reddy Newman, De Thomas, & Chun, 2009; Wilson, Lipsey & Derzon, 2003). Despite some favorable evidence for SEL programs working in afterschool contexts (Durlak, Weissberg, & Pachan,

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2010) there are some clear examples of when after-school programs have failed to produce a positive impact upon children's social learning outcomes (Gottfredson, Cross, Wilson, Rorie, & Connell, 2010; Lauver, 2002; United States [U.S.] Department of Education, 2003; Weisman, Soule, Womer, & Gottfredson, 2001). In fact, occasionally after-school programs have produced adverse effects on children's social learning outcomes (James-Burdumy, Dynarski, & Deke, 2008; Linden, Herrera, & Grossman, 2011). Many reasons have been discussed why social learning programs work, or fail to work, both in-school and in after-school contexts. These reasons include a wide range of implementation issues including: fidelity to program aims (Dumas Lynch, Laughlin, Smith, & Prinz, 2001); the amount of exposure children have to the program or dosage (Losel & Beelman, 2003); implementation takes time for program to embed (Adelman & Taylor, 2003; Dusenbury & Hansen, 2004); systems, structures and practices whereby the implementation of the program can be monitored (Domitrovich et al., 2008); a communities' delivery and support systems (Cross, Gottfredson, Wilson, Rorie, & Connell, 2010); the training intensity and quality of those who deliver the program (Lochman, Boxmeyer, Powell, Wells & Windle, 2009; Thaker, Steckler, Sanchez, Khatapoush, Rose & Hallfors, 2008); a mismatch between program type and participant characteristics such as age (McCart, Priester, Davis, & Azen, 2006); and differential classroom behavior expectations between in-school and after-school as well as the behavioral influences of peers in referral based after-school programs (James-Burdumy et al., 2008).

There is a research history of measuring perceptions of early intervention and prevention programs. However, this work has typically focused on parental satisfaction with programs (McNaughton, 1994). The following study uses a sub-set of data from a randomized controlled trial (RCT) evaluation of a pro-social behavior after-school program delivered in Dublin, Ireland (O'Hare, Kerr, Biggart and Connolly, 2012). As part of the process evaluation of program delivery, within this RCT study, the research team hypothesized that children's perceptions of social processes may be influential on program outcomes. As a result, Robert Freed Bales' work (1950, 1970) on group observation and interaction processes was chosen as a useful theoretical framework to explore children's perceptions of group processes. His theories highlight the specific importance of both tasks and relationships in group situations. As a result, a child self-complete questionnaire was designed to explore children's perceptions with the *Mate-Tricks* program tasks and their perceptions of their facilitator dispositions. It is suggested that the ratings of facilitator dispositions is a proxy measure of their relationship with their facilitator as it asks questions about how friendly, helpful etc., they think the facilitator is. In addition, classroom behavior has been hypothesized as a potential influence on program outcomes (James-Burdumy et al., 2008); so a further assessment of children's perceptions of their peers' behavior was included (see Method section for more detail on all these measures).

The final RCT evaluation of the *Mate-Tricks* program showed that it did not improve behavior and there were also two adverse effects of the program namely; increasing anti-social behavior and authoritarian parenting (O'Hare et al., 2012), and thus replicating some of the adverse results in previous large experimental studies of after-school programs on social learning outcomes (James-Burdumy et al., 2008; Linden et al., 2011). Therefore, it is important to understand any issues with program implementation that may have had an influence on the program's impact. The RCT evaluation identified problems of parental engagement with the program and its negative influence on program outcomes (O'Hare et al., 2012). This paper explores a further issue, i.e., children's perceptions with program tasks, facilitator relationships and peers' behavior.

2. Method

2.1. Participants

The study data is obtained from questionnaire responses from children who had taken part in a pilot of the *Mate-Tricks* after-school pro-social behavior program during a single school year. The data is pooled from two cohorts of children participating in the program in two successive years. The children came from a total of seven different primary schools (the same schools for each cohort) and attended seven after-school settings linked to each of these schools. There were 202 children who completed pre and/or post test measures over these two years. However, only 145 children completed the program perceptions questionnaire, and as a result, they are the sample of participants

included in this study. The participants were nine and ten year old children (average age on initial testing was 9.58 years) and within this sample there were 70 male and 75 female children. The children completed an average of 42.45 sessions (out of a maximum total of 57 sessions) of the program.

2.2 Design and Measures

The children completed assessments at three time-points during their involvement in the program. The first assessment was before the *Mate-Tricks* program began, i.e., a pre-test measure (in September), of two child outcomes namely; pro-social behavior and anti-social behavior. Pro-social behavior was assessed by child self-report, using a sub-scale from the Peer Relations and Pro-social Behavior Questionnaire (Rigby and Slee, 1992, Cronbach's alpha = .75). Anti-social behavior was also assessed by child self-report, using a sub-scale from the Peer Relations and Pro-social Behavior Questionnaire (Rigby and Slee, 1992, alpha = .83). The second assessment occurred at the mid-point of the *Mate-Tricks* program (in January) using self-report ratings of children's perceptions on three group process indicators. Each indicator was aggregated from a range of relevant five point likert scale items and subsequently assessed for reliability using a Cronbach's alpha test. The first two indicators were guided by Bales' work on group processes: child ratings of their facilitator dispositions were assessed using an in-house developed 'facilitator disposition checklist', which is used as a proxy measure of the child's relationship with their facilitator as it asks about relationship characteristics for example friendly, funny, angry etc. (O'Hare, Biggart and Kerr, 2010, alpha = .9); child perceptions of *Mate-Tricks* tasks was measured using an adapted form of 'The Client Satisfaction Questionnaire' (Larsen, Attkisson, Hargreaves, and Nguyen, 1979, alpha = .9). In addition, child ratings of peer behavior in sessions was also assessed (again on a five point likert scale) using an adapted version of the 'My class inventory' (Fisher and Fraser, 1981, alpha = .9). The final assessment took place at post-test (after the *Mate-Tricks* program was completed in June) which was a repeat administration of the measures used at pre-test.*

2.2. Statistical analysis

The analysis in this study includes: descriptive statistics; correlation between dependant and independent variables; and a regression analysis looking at the extent perceptual indicators predict behavioral outcomes. Not all children who completed the child perceptions assessments completed both pre and post-test behavior measures (mainly due to being absent at one of the pre and post-test assessment days). For these children an expectation maximization (EM) missing value analysis (Dempster, Laird, & Rubin, 1977) was conducted; so their perceptions data could be included in the study.

3. Results

The descriptive statistics in Table 2 show that there were generally positive perceptions for both tasks and facilitator dispositions in the program (mean = 4.24 and 4.48 respectively out of a maximum positive of 5). However, ratings for class behavior was lower (mean = 3.54) but still above the mid-point of 3 out of 5. Also, it can be seen that there was little overall behavioral change in the whole group between the pre and post assessments but some variability is present within the group.

Table 1. Descriptive Statistics of Children on all variables (N=145)

Variable	Minimum	Maximum	Mean	s.d.
Perceptions of peer behavior	1.52	4.76	3.54	.72
Perceptions of tasks	1.22	5.00	4.24	.85

* Contact author for more details about measures.

Perceptions of facilitator dispositions	2.32	5.00	4.48	.60
Change in pro-social behavior	-3.30	4.00	.10	1.03
Change in anti-social behavior	-3.33	2.67	.04	.87

Table 2 shows the correlations between the three child perceptions indicators, and the two behavior change outcomes. It can be seen there is several significant correlations between variables. In general, the perception indicators are moderately to highly correlating with each other. In particular, the correlation between facilitator and task perception indicators is very high ($r = .795$). Looking at the correlations between outcomes and perceptions, the ratings of facilitator dispositions significantly correlates with changes in both pro-social and anti-social (negatively correlating) behavior. This would suggest holding favorable perceptions of the program facilitator is related to desirable changes in behavior. Furthermore, there are significant correlations between the perceptions of tasks and peers' behavior with pro-social behavioral change but not with anti-social behavior change.

Table 2. Correlations between the three child perception indicators and behavioral change outcomes $r(p)$

	Perceptions of peer behavior	Perceptions of tasks	Perceptions of facilitator dispositions
Perceptions of peer behavior	.	.	.
Perceptions of tasks	.593 (<.001)	.	.
Perceptions of facilitator dispositions	.523 (<.001)	.795 (<.001)	.
Change in pro-social behavior	.216 (.009)	.279 (.001)	.169 (.043)
Change in anti-social behavior	-.002 (.979)	-.081 (.332)	-.179 (.031)

The regression analyses in Table 3 shows two incidences of children's perceptions significantly predicting behavioral change. Positive perceptions of program tasks significantly predicted an increase in pro-social behavior and positive perceptions of facilitator dispositions predicted a significant reduction in anti-social behavior. Although, the variance predicted in behavioral outcomes by both models is small as the adjusted R^2 is .071 and .028 respectively. Lastly, ratings of peer behavior did not significantly predict changes in either behavioral outcome.

Table 3. Regression models showing perception indicators predicting change in outcome variables B (S.E.)

	Change in pro-social behavior	Change in anti-social behavior
Perceptions of peer behavior	.129 (.144)	.117 (.124)
Perceptions of tasks	.425 (.171) ^a	.122 (.147)
Perceptions of facilitator dispositions	-.269 (.227)	-.466 (.196) ^a
Constant	-.959 (.650)	1.194 (.560)
Adjusted R^2	.071 (1.00)	.028 (.86)
N	144	144

^a Significant $p = <0.05$

4. Discussion

Overall, the results show that there was a small but significant link between children's perceptions of this after-school program and the actual change in their outcomes. These results provide support for using a model based on Bale's (1950 & 1970) key dimensions of group processes, i.e., tasks and relationships, when exploring children's perceptions of behavior intervention processes. Both children's perceptions of program tasks and their relationship with their facilitator (as assessed by ratings of facilitator dispositions) were found to be predictive of their behavioral outcomes. In addition, the absence of perceptions of peer behavior as a significant predictor of outcome change is

interesting, in that, previous research has hypothesized that influences of peer behavior are one of the factors that inhibit the effects of after-school social learning programs. Although, this study was not designed to test the hypothesis of a relationship between class behavior and outcomes comprehensively (i.e., it only explored the issue from the child's perspective) it does highlight a need for further research to establish the connection between classroom behavior and outcomes in social learning programs.

Specific perception indicators predicting change in specific behavioral outcomes is also noteworthy. Children's ratings of facilitator dispositions (i.e., their relationship) predicted reductions in a negative behavior. One potential reason for the facilitators' impact on reducing anti-social behavior is the well known concept of 'working alliance' or 'therapeutic alliance', which has received substantial research attention in clinical psychology and therapeutic literature (Horvath, & Symonds, 1991). Like Bales work this literature highlights the importance of relationships between clients and therapeutic practitioners and the outcomes of the therapy (regardless of the form of therapy). Children's perceptions of their facilitator may be a proxy measure for their working alliance with the facilitator and may be predicting a therapeutic outcome such as, in this study, a reduction in anti-social behavior. If this link is established through further research then there would be important lessons in terms of the training of facilitators in their role as practitioners of therapeutic change. Furthermore, like Bale's theories, working alliance literature also highlights tasks and goals (Bordin, 1976). Again, this study showed that when children were enjoying program tasks it influenced change in these pro-social outcomes.

It is important to highlight that the sample in this study is relatively small and thus it is not possible to look at setting level effects. In other words, is the relationship between perceptions and outcomes distributed throughout all the settings or is it concentrated within a few settings, which had a disproportionate influence on the whole sample outcomes? For example, did one or two facilitator's with particularly good relationships with their after-school participant children have an impact on the children's behavioral change and all others did not; or did all facilitator's have an influence on the children they had a good relationship with? These are important questions for future research in the area of afterschool social learning programs, but one that cannot be answered in the current study.

In conclusion, this research makes a significant link between children's perceptions of after-school social learning programs and their outcomes. The variance predicted by these perceptual indicators is small. However, any significant predictors of program outcomes should receive attention by program developers, evaluators and implementers. This attention is further warranted in the case of after-school social learning programs as previous research has shown they can have mixed effects due to implementation issues. This paper would encourage further research exploring the role of children's perceptions of program tasks and relationships in changing their outcomes. If these perceptions continue to show an impact on outcomes then the monitoring of children's perceptions could exert a real influence on program delivery practices, and ultimately support children's rights regarding participation and education.

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